

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1-2. (Cancelled)

3. (Currently Amended) An optical encoder comprising:

a scale having an optical grating;

a plurality of photoreceptor elements that are movable relatively with respect to the scale and that are disposed in relation to a pitch of the optical grating;

a light source having a plurality of light emitting elements at least two light portions which configured to irradiate the plurality of photoreceptor elements through the scale from at least two different respective directions, wherein a lighting intensity level of each one of the light emitting elements is independently controlled with respect to the other light emitting elements; and

a controller configured to adjust the lighting intensity level of the plurality of light emitting elements independently with respect to the other light emitting elements which changes the balance of light-emitting-intensity between at least the two light portions respectively;

wherein the controller obtains relative-position information with respect to of the scale and the plurality of photoreceptor elements based on photoreception signals received by the plurality of photoreceptor elements the balance of light-emitting intensity between the light portions and on the signals obtained before and after the change of the balance.

4-8. (Cancelled)

9. (New) The optical encoder according to Claim 3, wherein at least two of the plurality of light emitting lights irradiate light together simultaneously.

10. (New) The optical encoder according to Claim 9, wherein the on/off state of at least one of the plurality of lights is independently controlled with respect to the other light emitting elements, and

wherein the controller is configured to adjust the on/off state of at least one of the plurality of light emitting elements independently with respect to the other light emitting elements.